DETAILED ACTION

This office action is in response to the Amendment and Remarks filed 25 February 2008, in which claims 1-35 were presented for examination.

Response to Arguments

Applicant's arguments with respect to claims 1 and 35, specifically that the applied prior art does not describe the newly amended claim matter, have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 8-15, 19-27, 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al., US 6,970,783, in view of Lapidot et al., US 2003/0069683, and in further view of Kurosawa, US 2003/0132862.

Knockeart et al. discloses a method of broadcasting and receiving a digital traffic map comprising: assigning a priority for transmission to a first data, wherein the first data includes a first road segment having a first segment first endpoint and a first segment second endpoint (column 5, lines 53-61, column 10, lines 56-65, column 11, lines 20-28); assigning a priority for transmission to a second data, wherein the second data includes a second road segment having a second segment first endpoint and a second segment second endpoint (column 5, lines 53-61, column 10, lines 56-65, column 11, lines 20-28); assigning a priority for transmission to a third data, wherein the third data includes a speed data associated with the first road segment (column 29, line

20-column 30, line 29) transmitting to a plurality of receivers the third data based at least in part on the priority for transmission of the third data (column 39, lines 40-45 and column 41, lines 47-63); transmitting to a plurality of receivers the first data based at least in part on the priority for transmission of the first data (column 39, lines 40-45, column 11, lines 20-28); and transmitting to a plurality of receivers the second data road segment based at least in part on the priority for transmission of the second data (column 39, lines 40-45, column 11, lines 20-28); having a second segment first endpoint and a second segment second endpoint wherein the first segment and the second segment are combined together to form a portion of the digital map (Figure 8, column 5, lines 53-61). Knockeart discloses wherein the third data associated with the first road segment includes speed data, but does not teach wherein the priority for transmission of the third data is based at least in part on the speed data associated with the first road segment. However, Lapidot teaches a route guidance system wherein a route is segmented into a plurality of segments (Figure 11I) including a first and second segment each assigned a priority for transmission ([0369]), a third data that includes a speed data associated with the first road segment ([0452]-[0456]), wherein the priority for transmission is based at least in part on the speed data associated with the first road segment (Figure 11A, [0196]-[0199]). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method and system of Knockeart with the teachings of Lapidot because as Knockeart suggests it is important with remote route guidance systems to limit and make more efficient the transmission time and quantity, thereby prioritizing transmitted data; and Lapidot because recognizing the

segments that need to be updated more because of more frequent congestion is a data priority that can provide users with important and reliable information when following a route ([0196]). Neither Knockeart nor Lapidot describe the digital map displaying a plurality of elements including a plurality of major traffic arteries and one or more landmarks. However, Kurosawa teaches a vehicle navigation display method wherein the digital map comprises a plurality of elements including a plurality of major traffic arteries (figures 7A-B, [0041]) and one or more landmarks ([0039]). It would have been obvious to one of ordinary skill in the navigation and display arts to combine the descriptions of Knockeart and Lapidot with the teachings of Kurosawa because as Kurosawa suggests merely displaying landmarks and roads on the route map being used by the driver was well known ([0004]-[0005]) and the teachings of Kurosawa of distinguishing route objects from others allows the route to be more intuitively recognized by the user ([0008]-[0010]).

Knockeart further discloses wherein the segment state varies over time (column 34, lines 10-45); the segment state includes speed information (column 30, lines 27-30); the segment state includes road condition information (column 41, lines 37-63); and a transmitter transmits an updated segment state based on a real-time measurement (column 34, lines 10-45); the first segment has a segment state and the source of information for the segment state is a sensor (column 34, lines 10-45 and column 37, lines 35-47); the segment state is derived by processing information from a sensor (column 34, lines 10-45 and column 37, lines 35-47); the segment state is derived by processing information from a public or a private database (column 34, lines 10-45 and

column 37, lines 35-47, column 36, lines 18-28); wherein the road segment endpoints are transmitted in a road segment data packet (column 5, lines 53-61) that is comprised of a segment identifier, a first endpoint longitude and latitude and a second endpoint longitude and latitude, a name and a road type (Figures 6, 7, column 15, line 48-column 16, line 17, column 5, lines 34-43, and column 6, lines 21-29); wherein the first segment has a segment speed state and the segment speed state is transmitted in a speed update information packet (column 30, lines 18-42) that is comprised of a segment identifier and a speed (column 30, lines 1-29); wherein the first segment has a segment state and a transmitter (communication system 250) that transmits an updated segment state that is used to update a database (column 34, lines 10-45); wherein the segment state is used to update an optimum trip plan (column 11, lines 20-33 and column 12, lines 15-37) and an optimum route plan (column 30, lines 30-42); and wherein the segment state is used to update a digital map display of an area near to the receiver location (column 37, lines 56-60).

Claim Rejections - 35 USC § 103

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot and Kurosawa, in further view of Gueziec, US 2006/1058330.

Knockeart et al. in view of Lapidot discloses the method of broadcasting previously described and further discloses wherein the traffic information transmitted from the server to the in-vehicle unit for a first segment, having a segment state. Knockeart et al. does not disclose where the state includes weather information.

However, Gueziec teaches a method of distributing traffic information to a plurality of users wherein the traffic information and map information includes the state of road and weather information ([0078]). It would have been obvious to one of ordinary skill in the art to combine the teachings of Gueziec with the method of Knockeart et al. in view of Lapidot because as Gueziec suggests to provide the user with a more accurate overview of the current road conditions, including weather which effects the driving conditions (snow and heavy winds) and thereby impact the traveler ([0078]).

Claim Rejections - 35 USC § 103

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart in view of Lapidot and Kurosawa, in further view of Adachi, US 2004/0220727.

Knockeart in view of Lapidot discloses the methods of broadcasting a digital traffic map as previously discussed, but Knockeart in view of Lapidot does not disclose wherein the transmitted map comprises displaying accident information, wherein the segments are polygons, and displaying the updated segment states. However, Adachi teaches a traffic information map that is transmitted from a remote service apparatus to a vehicle navigation apparatus, wherein the vehicle apparatus receives a plurality of road segments, the road segments include accident information ([0018]), the segments are a part of a polygon that encloses an area of interest (Figures 6-8); and wherein the segments have a segment state the is used to update a digital map display ([0065]-[0067], [0106]-[0108]). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Adachi with the method of

Knockeart in view of Lapidot because as Adachi suggests, transmitting event information including the display of surrounding areas of interest, traffic event displays, it allows for a more efficient and user friendly system because the reasons for rerouting are displayed to the driver and transmits the important navigation map display with a deformed map segment thereby decreasing the amount of transmission time ([0018]-[0019], [0025], [0127]).

Claim Rejections - 35 USC § 103

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot, Kurosawa, and DeKock et al., and in further view of Koshizawa, US 5,661,472.

Knockeart et al. in view of Lapidot and DeKock et al. disclose a method of broadcasting a digital traffic map, wherein the transmitted segment states are derived from a speed sensor used to determine the speed of traffic over a roadway portion (Figures 1 and 2 of DeKock et al.). Wherein, it would have been obvious to one of ordinary skill in the art to use the traffic monitors of DeKock et al. because the addition of traffic information from monitors placed along a road side increases the amount of traffic information made available for updating a traffic database while not needing to rely on whether there are probe vehicles located at the road or not ([0056]). Neither Knockeart et al., Lapidot or DeKock et al. disclose adjusting the speed data for a mounting angle of the sensor. However, Koshizawa teaches and image processing device wherein the camera measurement is adjusted for the mounting angular error of the camera. It would have been obvious to one of ordinary skill to adjust the determined

speed data of Knockeart et al. in view of Lapidot and DeKock et al. with an angular mounting error to acquire an accurate data measurement as taught by Koshizawa (column 2, line 51-column 3, line 55).

Claim Rejections - 35 USC § 103

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot and Kurosawa, as applied to claim 1, in view of Mintz et al., US 2002/0082767.

Knockeart et al. in view of Lapidot discloses the method of broadcasting previously described and further discloses wherein the traffic information transmitted from the server to the in-vehicle unit for a first segment, having a segment state, wherein the segment state is derived from speed determined by a sensor. Knockeart et al. and Lapidot do not disclose where the segment state is derived by converting a raw speed to an effective speed. However, Mintz et al. teaches a method of distributing traffic information wherein the traffic information is derived from acquired raw speeds from probe vehicles and the raw speed is converted to an effective speed ([0137] and [0270]). It would have been obvious to one of ordinary skill to use the teachings of Mintz et al. with the method of Knockeart et al. in view of Lapidot because as Mintz et al. suggests the processing of raw data at the central location instead of at the individual probes frees more processing space and memory in the probe vehicle and can be used to provide more accurate maps ([0270]).

Claim Rejections - 35 USC § 103

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot and Kurosawa, as applied to claim 1, in view of Kodani et al., US 7,054,746.

Knockeart et al. in view of Lapidot discloses the method of broadcasting previously described and further discloses wherein the traffic information transmitted from the server to the in-vehicle unit for a first segment, having a segment state. Knockeart et al. does not disclose updating a map whose detail level depends on size of an area displayed or the user selection. However, Kodani et al. teaches updating a plurality of user displays with map information wherein the user selects the display level and size of the area displayed in a display (column 7, line 63-column 8, line 13) and the map display is updated depending on the size of the area displayed (Figures 13 and 25). It would have been obvious to one of ordinary skill in the navigation art to combine the teachings of Kodani et al. with the method of Knockeart et al. in view of Lapidot because as Kodani et al. suggests, limiting the updating of the map display by the size of the area displayed allows the user to control the frequency of the updating and thereby the cost of communication to the server for the updates (column 1, lines 47-55).

Claim Rejections - 35 USC § 103

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot and Kurosawa, as applied to claim 1, in further view of DeKock et al., US 2006/0074546 and in further view of Mintz, US 2002/0082767.

Knockeart et al. in view of Lapidot discloses the method of broadcasting previously described and further discloses wherein the traffic information transmitted

from the server to the in-vehicle unit for a first segment, having a segment state, is indicated using one of a variety of techniques including icons and color. Knockeart et al. does not disclose that the color indicating the traffic information corresponds to the segment speed state. However, DeKock et al. teaches a method of distributing traffic information to a plurality of users wherein the traffic information is indicated by the use of colors and patterns of the displayed road segment to represent the average vehicle speeds of the displayed road segment ([0053], Figures 6 and 8). Mintz also teaches the display of velocity of a corresponding road section associated with a selected color or a gray scale. It would have been obvious to one of ordinary skill in the art to combine the method of Knockeart et al. in view of Lapidot with the teachings of DeKock et al. and Mintz because as DeKock et al. and Mintz suggests the use of different colors and patterns to display the traffic information allows the user to quickly and intuitively understand the traffic conditions.

Claim Rejections - 35 USC § 103

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knockeart et al. in view of Lapidot and Kurosawa, as applied to claim 1, in view of DeKock et al. and Mintz et al., and in further view of Japanese Abstracted Publication No. JP 09184729A.

As applied in claims 31 and 33 DeKock et al. and Mintz et al. teaches the use of colors and patterns to display traffic information on a displayed navigation map corresponding to the speed on a map display. Neither Knockeart et al., Mintz et al., or DeKock et al. suggest allowing the user to select the colors or the pattern corresponding

to the speeds on the map display. However, JP 09184729A teaches allowing the user to select the map and background colors of a displayed map when the vehicle is stationary. It would have been obvious to one of ordinary skill in the art to allow the user to select the background and then corresponding display colors of the display maps so the user may customize the display to their particular liking.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE M. BEHNCKE whose telephone number is (571)272-8103. The examiner can normally be reached on 8:30 am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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